

REMARKS

The Office Action dated March 12, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Improper Finality

On pages 10-11 of the Response filed on December 12, 2007, Applicant traversed the §102(b) rejection of claims 1, 3-6, 8-11, and 13-15 by arguing that, for example, “Kalkunte does not teach or suggest that a determination is made whether the frame is for a member of a specific trunk group and a destination device identifier.” On pages 3-4, the Office Action quotes the foregoing passage from the December 12th Response, and discusses forwarding a packet, a destination address, a destination value, a trunked port of the trunk group, and a hash value, yet the Office Action fails to mention or alleged that “a destination device identifier” is disclosed by Kalkunte.

MPEP § 707.07(f) states that “[i]n order to provide a complete application file history and to enhance the clarity of the prosecution history record, an examiner **must** provide clear explanations of all actions taken by the examiner during prosecution of an application” (emphasis added). “Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant’s argument and answer the substance of it” (*Id.*). “The examiner must address all arguments which

have not already been responded to in the statement of the rejection” (MPEP § 707.07(f), Examiner Note 1).

As such, the Prosecution Record for the Application does not indicate the actual position of the Examiner regarding at least the limitations of “a destination device identifier.” Indeed, the record does not indicate whether the Examiner believes the claimed “destination device identifier” to be anticipated by Kalkunte’s source address, destination address, destination value, or trunk port, or whether the Examiner intended to take Official Notice of the claimed “destination device identifier.” Moreover, failure to specifically respond to Applicant’s arguments renders the Office Action arbitrary and capricious, and therefore invalid under the Administrative Procedure Act (5 U.S.C. § 706), a standard to which all Actions by the USPTO must adhere (see *Dickenson v. Zurko*, 527 U.S. 150 (1999)). Accordingly, Applicant submits that the final Office Action is deficient and request that the finality of the Office Action be withdrawn.

§102(b) Rejection

Claims 1, 3-6, 8-11, and 13-15 were rejected under 35 U.S.C. §102(b) as being anticipated by Kalkunte et al. (U.S. Patent Application Publication No. 20902/0027908, herein after “Kalkunte”). The Examiner took the position that Kalkunte discloses each and every limitation of claims 1, 3-6, 8-11, and 13-15. In light of the positions presented in the Office Action, Applicant notes that MPEP § 2131 states that “[a] claim is anticipated only if **each and every element** as set forth in the claim is found, either

expressly or inherently described, in a single prior art reference.’ Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)” (emphasis added). “‘The identical invention must be shown in **as complete detail** as is contained in the ... claim.’ Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)” (emphasis added). This rejection is respectfully traversed as follows.

Claim 1, upon which claims 2-5 depend, is generally directed to a method of handling frames in a network device, said method including receiving a frame at a network device of an assembly of network devices, with the assembly of devices divided into a first side and a second side and the network device being on the first side, and examining the received frame to determine whether the frame is destined for a member of a specific trunk group. The method includes determining whether a destination device identifier for the frame corresponds to one of the network devices on the second side, and forwarding the frame to a destination port based on being a member of the specific trunk group and the destination device identifier.

Claim 6, upon which claims 7-10 depend, is generally directed to a network device for handling frames, including receiving means for receiving a frame by a network device of an assembly of network devices, with the assembly of devices divided into a first side and a second side and the network device being on the first side, and examining means for examining the received frame to determine whether the frame is destined for a member of a specific trunk group. The network device also includes determining means

for determining whether a destination device identifier for the frame corresponds to one of the network devices on the second side, and forwarding means for forwarding the frame to a destination port based on whether the destination port is the member of the specific trunk group and the destination device identifier.

Claim 11, upon which claims 11-15 depend, is generally directed to a network device for handling frames, including a plurality of ports, configured to send and receive data frames, with at least one of said ports connected to other network devices of an assembly of network devices, with the assembly of devices divided into a first side and a second side and the network device being on the first side, and at least one port interface, for coordinating actions of said plurality of ports. The at least one port interface is configured to examine the received data frames to determine whether the data frames are destined for a member of a specific trunk group and whether a destination device identifier for the frame corresponds to one of the network devices on the second side. The at least one port interface is configured to forward the frame to a destination port based on whether the destination port is a member of the specific trunk group and the destination device identifier.

Each of the foregoing claims recites limitations that are not disclosed or suggested by Kalkunte.

Kalkunte generally discloses a switch fabric that includes path redundancy. In Kalkunte, the switch fabric is presented as a self-routing fabric that uses Ethernet, fast Ethernet, 1 gigabit and 10,000Mbps/s Ethernet systems, where all of the hardware is

disposed on a single microchip. Kalkunte also discloses packet processing and forwarding of data to maximize packet-forwarding at line speed.

However, Kalkunte fails to disclose or suggest, at least, “determining whether a destination device identifier for the frame corresponds to one of the network devices on the second side,” as recited in claim 1.

Additionally, Kalkunte fails to disclose or suggest, “determining means for determining whether a destination device identifier for the frame corresponds to one of the network devices on the second side,” as recited in claim 6.

Furthermore, Kalkunte fails to disclose or suggest, “wherein the at least one port interface is configured to examine the received data frames to determine...whether a destination device identifier for the frame corresponds to one of the network devices on the second side,” as recited in claim 11.

Instead, in column 2, line 65, to column 3, line 19, Kalkunte discloses that a data packet is received at a first port of a switch fabric and is read to determine packet information including a source address and a destination address. Additionally, an egress port bitmap is determined based on a lookup in a forwarding table and it is determined if the destination address belongs to a trunk group of trunked ports. The data packet is then forwarded based on the egress port bitmap, if the destination address does not belong to the trunk group. However, if the data packet does belong to a the trunk group, a particular trunked port of the trunk group is determined and the incoming data packet is forwarded thereto. More specifically, the particular trunked port of the trunk group may

be determined by calculating a hash value based on the source address and the destination value, and by selecting the particular trunked port based on the hash value.

However, Kalkunte fails to disclose that, for example, the switch fabric determines whether a destination device identifier for the data packet received by the first port corresponds to a second network device. Additionally, Kalkunte fails to disclose that the switch fabric “determines” anything regarding “a destination device identifier.” Furthermore, Kalkunte fails to disclose “a destination device identifier,” or even, for example, an 8-port gigabit switch “identifier.” Further still, Kalkunte fails to disclose that the switch fabric determines that a destination device identifier for the frame corresponds to “one of the network devices,” let alone performing the “determining” in terms of network devices on “a first side” and “a second side.” Not only does Kalkunte fail to disclose these and other limitations, but Kalkunte fails to suggest that performing operations somehow comparable to these limitations would be desirable.

Based on the lacking Kalkunte disclosure and the comments set forth in the Office Action on pages 3 and 5, it appears that the Examiner believes that the claimed “destination device identifier” is the same as the “destination address” of Kalkunte. However, this position is in violation of the manner set forth in the MPEP for interpreting the words of a claim. For example, MPEP 2111.01 states that “the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 132, 1322 (Fed. Cir. 1989).”

However, as set forth below, the position taken by the Examiner is in violation of both the plain meaning and the Specification requirements for interpreting claims.

For example, as supported by the plain meaning of the words “address” and “identifier,” an address is not the same as an identifier because an address indicates a location, whereas an identifier indicates a thing. To further clarify, a thing can be at a location, but the location is not the thing. Indeed, one skilled in the art of transporting data packets through computer networks and/or switch fabrics would appreciate the critical difference between an address and an identifier. As such, the Kalkunte “destination address” is not the claimed “destination device identifier.”

In addition to this plain-meaning distinction, the position that the claimed “destination device identifier” is the same as the Kalkunte “destination address” is inconsistent with the Specification. For example, in paragraphs [0006]-[0008] of the Background section, the Application indicates several trunking algorithms that are widely used for determining to which port of a trunk group a frame should be sent. These commonly used algorithms include hash functions that rely on a source address (SA), a destination address (DA), or a combination of the source address and the destination address {SA,DA} as a key to the a hash function (which, parenthetically, bear a striking resemblance of the operations that are described in Kalkunte and held to anticipate the claimed invention). Later, after highlighting the problems with using such hash functions in paragraph [0022]-[0023], the Specification indicates in paragraphs [0025]-[0027] that the problems are overcome by relying on source and destination device (or chip)

identifiers, as opposed to a destination address. In light of the above, as the Specification thoroughly discusses “a destination address” and “a device destination identifier” but only claim “a device destination identifier,” it makes little sense to say that the “destination device identifier” is “a destination address.”

Therefore, a position that the claimed “destination device identifier” and the Kalkunte “destination address” are the same is clearly inconsistent with the Specification and, therefore, in violation of MPEP 2111.01.

Additionally, on page 5, the Office Action asserts that the claimed “determining whether a destination device identifier for the frame corresponds to one of the network devices on the second side” is anticipated because Kalkunte allegedly discloses “examining the destination address of the frame to determine both the destination on the second side that the frame belongs to and the destination device associated with the trunk group on the second side that the frame belongs to.” The Office Action alleges that this description is found at column 2, lines 65-67, to column 3, lines 1-20.

Applicant has examined this passage of Kalkunte and has not found the subject matter alleged. Rather, as provided above, these Kalkunte passages describe that a data packet is received at a first port of a switch fabric and is read to determine packet information including a source address and a destination address. Additionally, an egress port bitmap is determined based on a lookup in a forwarding table and it is determined if the destination address belongs to a trunk group of trunked ports. The data packet is then forwarded based on the egress port bitmap, if the destination address does not belong to

the trunk group. However, if the data packet does belong to a the trunk group, a particular trunked port of the trunk group is determined and the incoming data packet is forwarded thereto. More specifically, the particular trunked port of the trunk group may be determined by calculating a hash value based on the source address and the destination value, and by selecting the particular trunked port based on the hash value.

Accordingly, these passages do not discuss making a determination regarding “a destination device identifier” or determining whether a frame corresponds to a “network device” in any way, let alone whether a frame somehow corresponds to “one of the network devices on the second side.” Indeed, Applicants are surprised by the allegations on page 5 of the Office Action regarding the claimed “determining.”

In light of this clear lack of anticipatory subject matter and the comments made on page 3 of the Office Action, it appears that the Examiner has taken the position that the claimed “determining” is inherently disclosed in Kalkunte. However, the claimed “determining” has not adequately been demonstrated to be “inherent” as required by the MPEP. MPEP §2112(IV) states that, “In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). Additionally, MPEP § 2112(IV) states that “[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.”

As best understood, the Examiner believes that because a trunk group of ports inherently belongs to a network device, determining that a destination address of a frame corresponds to a trunk group of ports, then a destination device identifier of the frame must correspond to a destination device on the second side as well (not an admission). In other words, because Kalkunte discloses that, “it is determined if the destination address belongs to a trunk group of trunked ports,” then Kalkunte inherently discloses the claimed “determining whether a destination device identifier for the frame corresponds to one of the network devices on the second side” as well.

However, the Examiner’s reasoning does not show that the claimed “determining” necessarily flows from Kalkunte because the claimed “determining” recites a “destination device identity,” whereas the above reasoning assumes a “destination address” instead. Furthermore, even if the recited “destination device identity” were a “destination address” (not an admission), the Examiner would still not have shown inherency because the Examiner has not shown why the claimed “determining” would necessarily be included in determining if a destination address belongs to a trunk group. Instead, all the Examiner has alleged is that the claimed “determining” might be inferred from a determination of whether a destination address belongs to a trunk group.

Moreover, not only has the Examiner failed to show that the claimed “determining” is inherent in Kalkunte, but a review of Kalkunte demonstrates that the claimed “determining” is, in fact, not inherent in Kalkunte. Evidence of this is that Kalkunte discloses determining if a destination address belongs to a trunk group of

trunked ports, but is completely silent as to determining anything regarding a network device. Indeed, Kalkunte is describes, in detail, a process for determining if a destination address of a packet belongs to a trunk group and selecting a particular trunked port based on a calculated has value. However, Kalkunte is silent in regards to determining anything about a frame corresponding to a network device, let alone the specific limitations in the claimed “determining.” Despite this clear lack of a “determining” operation, Kalkunte performs all the operations necessary for forwarding packets in accordance with the Kalkunte disclosure. As such, the claimed “determining” does not necessarily flow from Kalkunte and is therefore not inherent in Kalkunte.

In addition to not disclosing the claimed “determining whether a destination device identifier for the frame corresponds to one of the network devices on the second side,” Kalkunte also fails to disclose “forwarding the frame to a destination port based on being a member of the specific trunk group and the destination device identifier.” It appears that the Examiner is improperly interpreting the phrase “based on” in such a way that would be directly contrary to the Specification.

For example, Kalkunte “forwards” a packet to a destination frame “based on” calculating a hash value based on the source address and the destination value, and by selecting the particular trunked port based on the hash value. Contrarily, paragraph [0026] of the Specification recites that, “the device no longer sends any key to any hash function. In actuality, it does not rely on a hash result at all. Additionally, the device does not do a “lookup” on the trunking member to choose one of the trunking members to

be the final destination of the corresponding frame. Instead, it relies on the chip ID.” Accordingly, interpreting the claimed “based on” as including the hash key and function approach disclosed in Kalkunte would be contrary to the Specification, and in violation of MPEP 2111.01. Therefore, Kalkunte fails to disclose or suggest, “forwarding the frame to a destination port based on being a member of the specific trunk group and the destination device identifier,” as recited in claim 1, and as analogously recited in claims 6 and 11.

In accordance with the foregoing, Kalkunte fails to disclose or suggest all the limitations of claim 1. Additionally, Kalkunte fails to disclose or suggest all the limitations of independent claims 6 and 11, as these claims recite similar limitations, though each claim has its own scope. Furthermore, Kalkunte fails to disclose all the limitations of claims 3-5, 8-10, and 13-15 for their dependency from claims 1, 6, and 11, as well as for the patentable subject matter recited therein. Therefore, Applicant respectfully requests that the rejection to claims 1, 3-6, 8-11, and 13-15 be withdrawn.

§103(a) Rejection

Claims 2, 7, and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kalkunte, and further in view of Varanasi et al. (US 2005/0105904, hereinafter Varanasi). The Office Action took the position that Kalkunte fails to disclose or suggest that the examining of the received frame comprises examining the received frame to determine whether the frame is destined for the member of the specific trunking group of

ports providing connections over a high speed data port interface. This rejection is traversed on the grounds that a combination of Kalkunte and Varanasi fails to disclose or suggest all the limitations of claims 2, 7, and 12.

Kalkunte is discussed above. Varanasi generally describes a system and a method to route a flow of frames through a switch. In Varanasi, at least one frame is received from the flow of frames and a process is applied to select an exit port of the switch from a set of possible exit ports through which at least one frame from the flow of frames will exit so as to potentially reduce frame traffic congestion along potential routes that include the set of possible exit ports. The set of possible exit ports includes at least some of the exit ports of at least two trunk groups.

However, Varanasi does not cure the deficiencies of Kalkunte. Similarly to Kalkunte, Varanasi fails to disclose or suggest, at least, “determining whether a destination device identifier for the frame corresponds to one of the network devices on the second side,” as recited in independent claim 1 and as similarly recited in independent claims 6 and 11. Rather, Varanasi focuses on selecting an exit port of the switch from a set of possible exit ports through which at least one frame from the flow of frames will exit so as to potentially reduce frame traffic congestion. Therefore, a combination of Kalkunte and Varanasi fails to teach or suggest all the features of independent claims 1, 6, and 11, and related dependent claims.

In view of the foregoing, it is respectfully requested that dependent claims 2, 7, and 12 be allowed.

Conclusion


In view of the above, Applicant respectfully submits that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited references. Applicant further submits that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicant therefore respectfully requests that each of claims 1-15 be found allowable and this application passed to issue.

The foregoing comments made with respect to the positions presented in the Office Action are not to be construed as acquiescence with other positions presented in the Office Action that have not been explicitly contested. Accordingly, the above arguments for patentability of a claim should not be construed as implying that there are not other valid reasons for patentability of the claim or other claims. Additionally, the Applicant does not acquiesce that the cited art anticipates or renders obvious any of the claims as previously presented, and reserve the right to pursue any of the previously presented claims in a subsequent application.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jared T. Olson', written over a horizontal line.

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